

The Weather

Cloudy and mild today with a high of 68.
Cloudy with a chance of showers tonight.
Yesterday's high, 72; low, 40.
(Details and Map, Page C8)

THE



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Kennedy X-Ray Data



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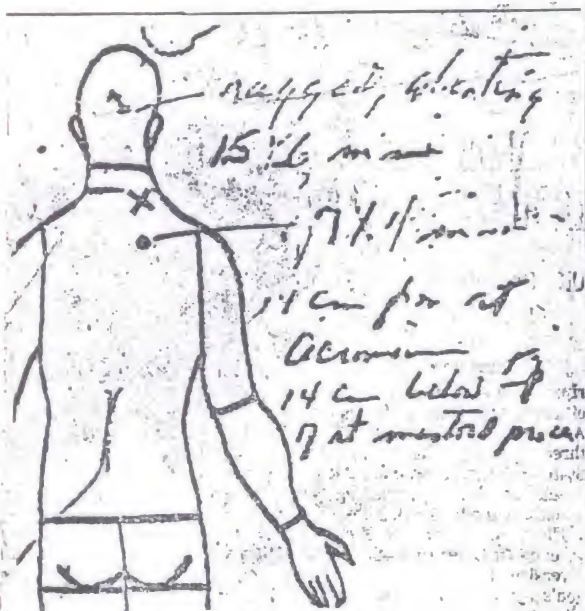
Pathologist Who Made Examination Defends Commission's Version

Says Pictures And Details Back Up Warren Report

By RICHARD A. LEVINE

The former chief of pathology at Bethesda Naval Hospital said yesterday that the release of the autopsy photographs and X-rays of President Kennedy to competent, disinterested observers would end the controversy about the types and locations of the late President's wounds.

Dr. J. Thornton Boswell, one of a team of three pathologists who performed the autopsy on the assassinated President, said, "I



WOUND LOCATION—Dr. J. Thornton Boswell said yesterday President Kennedy's neck wound should have been indicated where the X is, and not, as he did during the autopsy, where the dot on the back is. Notations on the drawing are correct and precise, he said, indicating neck wound.

cannot simply tell you what we found and make everybody in the country believe it.

He said the photographs and X-rays prove conclusively that the facts about the wounds as printed in the Warren Commission Report were consistent with the findings of the autopsy.

Host Of Theories

In an interview yesterday, Dr. Boswell also discussed other aspects of the autopsy and the wounds that have led to a host of theories about the shooting, and speculation about the number of bullets and the number of assassins.

He said there was absolutely no doubt that the controversial neck and throat wound was caused by a bullet that entered the base of President Kennedy's neck, passed completely through the neck and exited from the throat.

Writers claiming a second assassin was involved in Dallas on

November 22, 1963, suggest the President was shot in the neck by someone located in front of the presidential limousine.

Contributed To Controversy

Dr. Boswell, himself, contributed to the controversy with a sketch he made during the autopsy indicating that the President had been shot lower in the back than the wound described in the Warren Report.

Yesterday, he said that the error did not seem significant at the time, since he assumed that the wound photographs would be available.

In an interview at his home in Bethesda, Dr. Boswell, who is now retired from the Navy and in private practice, recounted details of the entire autopsy.

His remarks, in several instances, dealt with key matters that are central to the theories of those critics who believe that more than one person killed the President.

Among the important points he made were these:

1. All of the shots that struck the President came from behind him.
2. The President was struck by two bullets, one of which hit him in the head and disintegrated, the other of which passed through his neck.
3. There was no other bullet wound.
4. The wound in the back of the neck, was without any doubt, one of entrance and not of exit.
5. A report made by FBI ob-

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By RICHARD H. LEVINE

(Continued from Page A 1)

servers present at the autopsy inaccurately referred to a "back" wound rather than a neck wound and should be discounted.

Critics of the Warren Commission claim that the commission depended on what is known as the "single bullet theory" to support the conclusion that Lee Harvey Oswald was the sole assassin.

The critics claim that Oswald was the sole assassin only if Gov. John Connally of Texas, riding in front of the President, was wounded by the same bullet that went through Mr. Kennedy's neck.

The critics and the commission agree that Oswald could not have shot both men with separate bul-

lets in the time available to run as determined from movie film of the shooting.

Either a back wound which did not exit from the President's body, or a front neck wound, could mean that other shots had been fired at the Governor by other marksmen.

Dr. Boswell's views, therefore, support the "single bullet theory."

However, he would not speculate outside the area of the autopsy except to say that Governor Connally was probably wounded in the body by the neck bullet.

Lodged in Left Leg

The bullet that hit the Governor in the back shattered a rib, ripped through a lung, exited from his chest, shattered his right wrist and finally lodged in his left leg above the knee.

Dr. Boswell said the bullet that struck the President in the neck "wouldn't have lost very much in terms of mass or velocity" and could have passed through the Governor's body since he was in a position to get hit by it.

He would not speculate on whether the bullet could also have shattered the Governor's wrist and have lodged in his leg.

Nor would he comment on the bullet found in Parkland Hospital in Dallas which is said to be the

one that wounded both men. That bullet is almost totally intact.

Those questions, he said, are for ballistics experts to determine.

The autopsy was performed the night of November 22, 1963, by Commander Boswell, Lt. Col. Pierre Finck, a wound-ballistics expert, and James J. Humes, overall chief of pathology and Commander Boswell's superior.

Dr. Boswell said the autopsy was routine in every respect, and that it included every activity which would accompany a medical-legal autopsy.

He pointed out that, at the time, Oswald was still alive, and it was believed that the autopsy information would later be called upon in court proceedings.

Dr. Boswell explained that a specific procedure is followed in autopsies which is designed to cover every aspect of a death that might be the subject of inquiry at a later date.

He said the general physical

condition of the President as well as the wounds, was noted in detail with microscopic slides and tissue specimens collected for further examination.

Among the slides, he said, were those of tissue at the neck wound which indicated, by the presence of foreign substances such as fiber particles, that the wound was one of entrance.

There was no mention in the autopsy reports of these slides of the wound, and Dr. Boswell could not explain why.

Dr. Boswell said that the President's body was subjected to a thorough external examination. All marks and scars, were noted, including old surgical scars and surgical cuts made that day by Dallas doctors trying to save his life.

The pathologists had already been told of the probable extent of the injuries and what had been done by physicians in Dallas.

Wound Not Evident

The wound in the throat was not immediately evident at the autopsy, Dr. Boswell said, because of the tracheotomy performed in Dallas.

He said the wound in the back of the neck was noticed when the body was turned over. It was a new discovery.

According to the Warren Commission testimony, Dallas physicians did not make a thorough examination of the President at first because of the evident seriousness of the massive head wound and the necessity of immediate emergency procedures.

They believed the throat wound was an entrance wound and never did turn the body over to look for back wounds, even after the President died.

Dr. Boswell said that the tracheotomy incision was examined and extensive trauma was noted on one side.

When the wound in the back of the neck was discovered and probed, by finger and by metal surgical probe, no bullet could be located.

He said that the probing was to a depth of about 4 or 5 centimeters.

Complete X-Rays

At this point, according to Dr. Boswell, complete x-rays of the entire body were ordered in an effort to locate the bullet.

Dr. Boswell recalled that either he or one of the other pathologists made a remark to the effect that the bullet might have worked its way back out of the entrance wound.

"This was a very transient thought," he said, adding that he had never seen a case in which this had happened and therefore

did not give this possibility much weight.

What was more probable, he said, was the possibility of the bullet's being in some remote area of the body.

He said that medical literature recounts many examples of wildly erratic paths taken by bullets that ricochet through the body, glancing from bones and slipping along muscle planes.

As an example, he mentioned a case he examined where a bullet that entered the victim's chest was located in a lower leg.

The doctor said that retrieval of bullets, as well as the determination of their paths, is extremely important in all forensic autopsies because of the legal necessity of linking wounds, bullets, weapons and assailants.

Dr. Boswell said the x-rays were immediately examined by all three pathologists as well as by the radiologist who took them.

He said the presence of bullets in an x-ray is unmistakable be-

cause of the capacity of metal to block the rays.

He said there was no bullet in the body, although "minute particles" could be discerned in the head.

Dr. Boswell said he is "absolutely" convinced that all of these particles came from the bullet that struck the President's head.

Bullet In Stretcher

Around this time, according to the FBI report, the FBI observers informed Dr. Humes that a bullet had been recovered from a stretcher in the Dallas hospital.

Dr. Boswell said that the autopsy was resumed after the examination of the x-rays, the pathologists assuming that, unlikely as it seemed, the bullet had exited from the same hole it entered.

He said that the autopsy proceeded routinely. According to the autopsy report, and confirmed by Dr. Boswell, the internal examination revealed a bruise in the apex, or uppermost tip, of the right lung.

There was also a bruise of the parietal pleura, the membrane that lines the lung cage.

Dr. Boswell said he and his colleagues decided that the bullet had not made a superficial wound after all, but had passed above the area of the bruise.

He said that neither the parietal pleura nor the lung cage were disrupted, indicating that the lung cage had not been pierced.

"We concluded that night that the bullet had, in fact, entered in the back of the neck, traversed

the neck and exited anteriorly," Dr. Boswell said.

He said that a telephone call made to the hospital in Dallas by Dr. Humes the following morning merely confirmed what was already a certainty to the pathologists — that there was a bullet wound in the President's neck at the point of the tracheotomy incision.

Dr. Boswell said it was impossible to determine during autopsy if the throat wound was one of entry or exit because of the incision.

Determination Unnecessary

This determination was unnecessary, he said, since the wound in the back of the neck was determined by observation and microscopic examination of entry, and because the path of the bullet was determined by the bruise marks in the lung area.

Analysts working for the Warren Commission report claim that the precise bullet path indicated in a medical drawing—exhibit 385—is essential to the theory that the neck bullet was the one that struck Governor Connally.

This drawing shows a profile of the head and right shoulder of the President with the bullet path indicated by thick dotted line.

Dr. Boswell said it was a scale drawing based on a photograph taken of the President, when he was alive. He said the bullet path was drawn using data about the entry hole and the lung bruises obtained during the autopsy and

the precise exit wound as defined by the Dallas physicians.

He said that Dr. Humes told him, after arriving home, that he decided to write the "protocol," or final report, immediately after the autopsy, and did so early in the morning from notes taken at the autopsy and from his recollections.

Later that day, November 23, Dr. Humes and Dr. Boswell went over the rough draft and completed the protocol in its final form.

Before this, an incident took place that has created much controversy. Dr. Humes destroyed "certain preliminary draft notes" by burning them in his fire place.

Originals Preserved

Dr. Boswell said that all original notes were preserved, as far as he knows, and were turned over to National Archives. He said the things that were burned were copies of the protocol as they were revised.

On November 24, the final pro-

tolocol was typed up, signed by all three pathologists, and handed over to Adm. George G. Burkley, President Kennedy's physician.

Sometime later, an additional report containing microscopic examination data—but not the specimens of the wound—was also submitted.

The FBI account of the autopsy is dated November 26, four days after the examination.

It refers to a back wound, but this, according to Dr. Boswell, can be a laymen's observation of

an area just below the shoulder line that, to a physician, is still the neck region.

More disturbingly, it recounts the incident during which the exit wound was undiscovered and leaves, unchanged, a statement in which Dr. Humes concluded the bullet had worked itself out of the same hole it had entered.

Story Left Unchanged

Dr. Boswell said that, at the time, he paid no attention to the presence of the FBI agents but that he can only conclude that they either did not understand what later took place, or else left before the lung contusions were discovered.

Dr. Boswell said that he first saw the photographs taken at the autopsy when they were turned over to the National Archives on November 21.

He said that they show clearly exactly where the bullet entry was. The pictures are absolutely identifiable by inventory numbers, by the recollection of the pathologists, and by the inclusion in several pictures of the face of the President.

On the autopsy sketch drawn by Dr. Boswell are computations to locate the neck wound by measurement.

Dr. Boswell used, as places of reference, the right acromion process—the highest point on the shoulder bone that can be felt near the joint of the shoulder and collar bone — and the mastoid prominence—the base of the bone just behind the ear.

He said these were standard re-

ference points used in such cases.

He placed the wound at the intersection of 14 inch arcs described from these reference points.

He said yesterday that he thought he had used a vertebra as a third reference point, but that this did not appear in the autopsy report or in the sketch.

The sketch itself would normally have been thrown away, he said, in any case but this one.

"We didn't anticipate this would have become as important as it did," he said.

Holes In Shirt

He called it a "scratch sheet" that would have been replaced, in other cases, with a photograph to supply the pictorial element.

Dr. Boswell also offered an explanation of another controversial point.

The shirt and jacket worn by the President on November 22, 1963, have holes in the back at approximately the place indicated in his autopsy diagram.

Dr. Boswell said this was only coincidental.

He said that the President, according to movie films, had his arm raised, waving at the crowds, when he was shot. This movement would have raised his coat and shirt resulting in bullet holes lower in the clothing than were indicated by the wound.

The clothing had been removed from the President's body in Dallas, he said, before it was flown to Bethesda for the autopsy.